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TO THE

# MATHEMATICAL GAZETTE

No. 144, JAN. 1920-No. 155, DECEMBER 1921.

COMPILED BY MRS. W. J. GREENSTREET.

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- 2. Mathematical Notes.
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### EXPLANATORY REMARKS.

It is not possible to give in full the subjects under the thousand or so sub-divisions which appear in the Index; but for the sake of those who do not possess the Index we give general titles with the principal letters. This will amply suffice for the majority of our readers.

#### MATHEMATICAL ANALYSIS.

- A. Elementary Algebra; theory of algebraic and transcendental equations; Galois groups; rational fractions; interpolation.
- B. Determinants; linear substitutions; elimination; algebraical theory of forms; invariants and covariants; quaternions; functional determinants; differential forms; equipollences and complex quantities; universal algebra.
- C. Principles of the differential and integral calculus; analytical applications; quadratures; multiple integrals; functional determinants; differential forms; differential operators.

- D.] General theory of functions and its application to algebraical and circular functions; infinite series and expansions, especially infinite products and continued fractions considered from the algebraical point of view; Bernoulli's numbers; spherical and analogous functions.
- E. Definite integrals, and Eulerian integrals in particular.
- F. Elliptic functions with their applications.
- G. Hyperelliptic, Abelian, and Fuchsian functions.
- H. Differential equations, and equations with partial differences; functional equations; equations with finite differences; recurrent series.
- I. Arithmetic and theory of numbers; indeterminate analysis; arithmetical theory of forms and of continued fractions; the division of the circle; complex, ideal, and transcendental numbers.
- J. Combinatory analysis; probabilities; calculus of variations; general theory of groups of transformations (omitting Galois groups (A), groups of linear substitutions (B), and groups of geometrical transformations (P); Cantor's theory of aggregates.
- K. Geometry and Trigonometry; projective and descriptive geometry; perspective.
- L. Conics, quadrics, etc., of the second degree.
- M. Algebraic and transcendental curves, surfaces, etc.
- N. Complexes and congruences; connexes; systems of curves, surfaces, etc.; enumerative geometry.
- O. Infinitesimal and kinematic geometry; geometrical applications of the differential and integral calculus to the theory of curves, surfaces, etc.; quadrature and rectification; curvature; asymptotes; geodesics, lines of curvature; areas and volumes; minima surfaces; orthogonal systems.
- P. Geometrical transformations; homography; homology and affinity; correlation and reciprocal polars; birational and other transformations.
- Q. Geometries; generalities on geometry of n dimensions; non-Euclidean geometry; analysis situs; the geometry of situation.

#### APPLIED MATHEMATICS.

- R. General Mechanics; kinematics; statics, comprising centres of gravity and moments of inertia; dynamics; mechanics of solids; friction; attraction of ellipsoids.
- 8. Mechanics of fluids; hydrostatics; hydrodynamics; thermodynamics.
- T. Mathematical physics; elasticity; resistance of materials; capillarity; heat; light; electricity.
- U. Astronomy; celestial mechanics; geodesy.
- ▼. The philosophy and history of mathematics; teaching of mathematics; biographies of mathematicians.
- X. Processes of calculation; nomography; graphic calculation; planimeters instruments of various kinds; games and recreations.

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